CLAIM AMENDMENTS

The following listing of the claims replaces all prior versions, and listings, of the claims in the application.

1. (Currently Amended) A color measurement instrument comprising:

illuminator means for illuminating a sample;

color measurement means for measuring light reflected from said sample;

a temperature changing ~~means~~ element for changing ~~the~~ a temperature of said illuminator means;

temperature sensing means for sensing the temperature of said illuminator means; and

control means responsive to said temperature sensing means for controlling said temperature changing ~~means~~ element to control the temperature of said illuminator means.

2. (Original) A color measurement instrument as defined in claim 1 wherein said illuminator means includes a light emitting diode (LED).

3. (Original) A color measurement instrument as defined in claim 1 wherein said illuminator means includes an illuminator and a thermally conductive base supporting said illuminator.

4. (Currently Amended) A color measurement instrument as defined in claim 3 wherein said temperature changing ~~means~~ element and said temperature sensing means are mounted on said base.

5. (Currently Amended) A color measurement instrument comprising:

an illuminator;

a color measurement engine; and

control means for actively controlling ~~the~~ a temperature of said illuminator wherein said control means includes:

a temperature sensing element thermally connected to said illuminator; and

a temperature changing element thermally connected to said illuminator.

6. (Original) A color measurement instrument as defined in claim 5 wherein said illuminator includes a light emitting diode (LED).

7. (Currently Amended) A color measurement instrument as defined in claim 5 wherein ~~aid~~ said illuminator further includes a thermally conductive base, said control means coupled to said base.

8. (Currently Amended) A color measurement instrument as defined in claim 7 wherein ~~said control means includes~~:

~~a~~ said temperature sensing element is supported by said base; and

~~a~~ said temperature changing element is supported by said base.

9. (Currently Amended) A method of measuring color comprising the steps of:

illuminating a sample with at least one illuminator in thermal communication with a thermally conductive base;

measuring light reflected from the sample; and

controlling ~~the~~ a heating element in thermal communication with the base to control a temperature of the at least one illuminator to enhance the uniformity of at least one output characteristic.

10. (Original) A method as defined in claim 9 wherein:

the at least one illuminator comprises a light emitting diode (LED); and

the at least one output characteristic includes intensity, spectral energy distribution, and spatial distribution of the light from the LED.

11. (Currently Amended) A method as defined in claim 9 wherein said controlling step includes:

measuring the temperature of the ~~illuminator~~ base;

comparing the temperature of the ~~illuminator~~ base with a desired temperature; and

~~applying heating or cooling to the illuminator depending~~ controlling the heating element based on said comparing step.

12-20. (Canceled)

21. (New) A color measurement instrument, comprising:

a substrate;

a temperature sensor in thermal communication with the substrate;

a heating element in thermal communication with the substrate;

a temperature-sensitive illuminator in thermal communication with the substrate;

a temperature controller coupled to the temperature sensor and the heating element; and

a light-sensing device.

22. (New) The color measurement instrument of claim 21, wherein the temperature sensor is a thermistor.

23. (New) The color measurement instrument of claim 21, wherein the heating element is a resistor.

24. (New) The color measurement instrument of claim 21, wherein the temperature-sensitive illuminator is a light emitting diode.

25. (New) The color measurement instrument of claim 21, wherein the light-sensing device is a photodiode.